

Appl. No. 10/552,022  
Amdt. dated 11 / 20 / 2007  
Reply to Office action of 08 / 21 / 2007

Amendments to the Specification

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**Corrections of spelling**

In paragraphs [0001] and [0026] the word: "computerised" is replaced by: "computerized".

In paragraph [0002] the word: "synthesisers" is replaced by: "synthesizers".

In paragraph [0008] the word: "authorise" is replaced by: "authorize".

In paragraph [0079] the word: "authorised" is replaced by: "authorized".

In paragraphs [0054] and [0071] the word: "millimetre" is replaced by: "millimeter".

In paragraphs [0009], [0053], [0056], [0057], [0064], [0065], [0067], [0068], [0071], and [0080] the word: "millimetres" is replaced by: "millimeters".

In paragraphs [0010] and [0039] the word: "parameterised" is replaced by: "parameterized".

In paragraphs [0017] and [0018] the word: "favour" is replaced by: "favor".

In paragraph [0034] the word: "widthways" is replaced by: "width ways".

In paragraph [0073] the word: "srip" is replaced by: "strip".

In paragraph [0073] the word: "extremiy" is replaced by: "extremity".

**Corrections of punctuation**

At the end of paragraphs [0017], [0018], [0019] and [0020] the full stop is deleted.

At the end of paragraphs [0024], [0025], [0026], [0027] and [0028] the full stop is deleted.

At the end of paragraphs [0032], [0033] and [0034] the full stop is deleted.

Paragraphs [0022], [0036], [0037] and [0038] must begin with a capital.

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Please replace paragraph [0005] with the following amended paragraph:

[0005] This invention concerns a device which, according to a first characteristic, is in the shape of a cylindrical or non-cylindrical stick or bar on all or part of its surface, usable with one or more hands without the help of the mouth and which, by pressure, brushing or nearing of the dedicated control zones, juxtaposed along ~~[[the]]~~ said stick or ~~[[the]]~~ said bar on all or part of its surface, allows ~~[[the]]~~ a user to trigger, control and stop electronic, electrical and mechanical events by way of contactors, switches, sensors or controls dependent on these "control" zones or partly or wholly composing these "control" zones.

Please replace paragraph [0006] with the following amended paragraph:

[0006] The shape and the layout of these "control" zones and the shape of the controlling instrument concerned by this invention allow the user's fingertips to access these "control" zones with each hand independently oriented with the palm towards ~~[[the]]~~ a user or the back towards ~~[[the]]~~ a user without any particular effort or obligation to touch the controlling instrument concerned by this invention with the forearm or the arm.

Please replace paragraph [0008] with the following amended paragraph:

[0008] The layout of these "control" zones allows in a non-restrictive way the user who so wishes to find the order of the keys offered by a conventional pianoforte type keyboard. The layout of these "control" zones allows ~~[[the]]~~ a user in a non-restrictive way, during musical use, to find the order of the notes offered by a conventional pianoforte type keyboard, namely low to high from left to right, and, in a non-restrictive way, if the systems connected to the device according to this invention ~~authorise~~ authorize it, to play in polyphony. The device according to this invention allows ~~[[the]]~~ a user, in a non-restrictive way, if the systems connected to the device according to this invention ~~authorise~~ authorize it, to trigger, control and stop several electronic, electrical and mechanical events simultaneously.

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Please replace paragraph [0002] with the following amended paragraph:

[0002] Keyboards with pianoforte type ergonomics are very widely used around the world to trigger and control ~~synthesizers~~ synthesizers and samplers and can also be used to control slaved spotlights, their accessories and certain remotely controlled stage machines.

Please replace paragraph [0003] with the following amended paragraph:

[0003] When placed on a support, such keyboards oblige ~~[[the]]~~ a user to be close to them in order to play them, either in front of, behind or alongside them. When ~~[[the]]~~ a user wishes to move over a greater distance while still playing, he can carry on a shoulder strap a light pianoforte type keyboard which does not allow playing with both hands on five simultaneous octaves or more as with a conventional pianoforte type keyboard placed on a support. If the pianoforte type keyboard carried on a shoulder strap allows playing with both hands on five simultaneous octaves, the shape and weight constraints it imposes are restrictive as to the time for which it can be used in a standing position and when moving.

Please replace paragraph [0004] with the following amended paragraph:

[0004] The device according to this invention, although not presenting the ergonomics of a pianoforte type keyboard, enables ~~[[the]]~~ a user to trigger, control and stop electronic, electrical and mechanical events and, according to a first characteristic, to be mobile during use, without any major shape and weight constraint, in the same way, to give a non-limitative example, as a guitarist carrying his instrument on a shoulder strap, while at the same time retaining the possibility of playing with both hands on five simultaneous octaves or on more or less five simultaneous octaves, depending on the variants required to be produced of the controlling instrument concerned by this invention, and, according to second characteristic, offers, at the same time as this playing with two hands, additional control possibilities compared to conventional pianoforte type keyboards placed on a support or compared to those carried on a shoulder strap, without the addition of a pedal or contactor which might be operated with the foot or the addition of a control which might be operated with the mouth.

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Please replace paragraph [0009] with the following amended paragraph:

[0009] The number, size and shape of the "control" zones are also defined by the variants of the controlling instrument concerned by this invention which are required to be produced. To give a non-limitative example, sixty-one control zones eighteen ~~millimetres~~ millimeters wide, each comprising a strain gauge sensing the surface finger pressure, can be positioned in rings juxtaposed along the said stick or bar.

Please replace paragraph [0010] with the following amended paragraph:

[0010] This invention concerns a device which, according to a second characteristic, by undergoing one or more bending or twisting stresses, enables ~~[[the]]~~ a user to trigger, control and stop electronic, electrical and mechanical events by way of contactors, switches, sensors or controls dependent on this or these bending or twisting stresses. The stopping of a bending or twisting stress may be ~~parameterised~~ parameterized as an instruction.

Please replace paragraph [0017] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0017] to complement and ~~favour~~ favor the first and second characteristics, the stick or the bar formed for or by the juxtaposition of the "control" zones may comprise one or more parts external to these "control" zones, without any effect on these zones, to allow, for example, the pressing of the thumb or the pressing of the controlling instrument concerned by this invention on a part or parts of the user's body ~~[[.]]~~

Please replace paragraph [0018] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0018] to complement and ~~favour~~ favor the first and second characteristics, the controlling instrument concerned by this invention can be carried on a shoulder strap or attached to the user's body by any flexible or solid means~~[[.]]~~

Please replace paragraph [0019] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0019] each of the contactors, switches, sensors and controls of the controlling instrument concerned by this invention may be partly or wholly sensitive or insensitive to the intensity and/or the velocity of the action which is applied to it by ~~[[the]]~~ a user~~[[.]]~~

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Please replace paragraph [0020] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0020] each of the controls and "control" zones of the controlling instrument concerned by this invention may be indicated by one or more characters, signs or symbols, or protruding or recessed or luminous markings[.]

Please replace paragraph [0022] with the following amended paragraph:

[0022] ~~parts~~ Parts may be placed at the ends of the length of the stick (or bar) or formed for or by the juxtaposition of the "control" zones or incorporated in it or linked to it or installed separately.

Please replace paragraph [0024] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0024] accommodate contactors, switches, sensors, potentiometers, additional finger controls and screens enabling ~~[[the]]~~ a user to control a system or systems, embedded or otherwise, serving to configure the controlling instrument concerned by this invention, to generate and apply modulations, to use memories, to start the playing and recording of sequences, and to trigger, control and stop electronic, electrical and mechanical events[.]

Please replace paragraph [0025] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0025] accommodate and house the electrical and electronic system or systems necessary for the recognition, management and encoding of each of the controls and functions of the controlling instrument concerned by this invention [.]

Please replace paragraph [0026] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0026] accommodate and house the electrical and electronic system or systems necessary for the generation, management, transmission and reception of the electronic or ~~computerised~~ computerized protocols and languages chosen for the communication between the controlling instrument concerned by this invention and a system or systems, embedded or otherwise, generating electronic, electrical, audible, visual and mechanical events[.]

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Please replace paragraph [0027] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0027] accommodate and house a system or systems generating audible, visual and mechanical events linked directly to the control recognition and management system of the controlling instrument concerned by this invention[[]]

Please replace paragraph [0028] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0028] accommodate and house the necessary electrical power supply [[]]

Please replace paragraph [0032] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0032] the device according to the invention comprises a handling bar which may be flexible, ~~the length of which is constituted by the juxtaposition of finger controls~~ are juxtaposed on the length of the flexible bar [[]]

Please replace paragraph [0033] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0033] the finger controls juxtaposed on the length of the handling bar may form a surface which extends from one edge to the other of the width of the said bar[[]]

Please replace paragraph [0034] with the following amended paragraph (At the end of the paragraph the full stop is deleted):

[0034] the finger controls juxtaposed on the length of the handling bar may form a surface which is curved in the ~~widthways~~ width ways direction [[]]

Please replace paragraph [0035] with the following amended paragraph:

[0035] ~~the juxtaposition of these finger controls may compose a flexible length~~ the bar on which finger controls are juxtaposed is flexible, and the device according to the invention may comprise at least one sensor for the bending.

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Please replace paragraph [0036] with the following amended paragraph:

[0036] ~~the~~ The device according to the invention ~~may comprise~~ comprises one or more additional finger controls, the operation of which by ~~[[the]]~~ a user replaces the triggering of the finger controls juxtaposed on the length of the handling bar, which are then used to designate the events to be triggered.

Please replace paragraph [0037] with the following amended paragraph:

[0037] ~~this~~ This or these additional finger controls may be made of a flexible material and comprise a sensor for the bending; they may be bent by a finger or by an accessory held by a finger or fingers.

Please replace paragraph [0038] with the following amended paragraph:

[0038] ~~five~~ Five additional finger controls of this type may be placed alongside each other in parallel to the handling bar on a support attached at the end of this bar.

Please replace paragraph [0039] with the following amended paragraph:

[0039] To give a non-limitative example, during musical use, these five additional finger controls, which will be designated for easier understanding as CS1, CS2, CS3, CS4 and CS5, can be ~~parameterised~~ parameterized to be used as follows:

Please replace paragraph [0053] with the following amended paragraph:

[0053] According to the modes of production illustrated by FIGS. 1, 2 and 3, the device comprises a flexible plastic tube (2) ~~1119 millimetres~~ millimeters long with an external diameter of 50 mm and a crown thickness of 2 mm.

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Please replace paragraph [0054] with the following amended paragraph:

[0054] Sixty one stress gauge variable resistors sensing the surface pressure (3), 17 mm wide and 115 mm long, are arched lengthways, secured in such a way as to fit around the outer curve of the tube (2) and positioned along this tube at intervals of one ~~millimetre~~ millimeter; care should be taken to leave 11 mm free at each end of the tube (2).

Please replace paragraph [0056] with the following amended paragraph:

[0056] 5 ~~millimetres~~ millimeters before each end of the tube (2), eight holes (7) with a diameter of 3 mm are made at regular intervals on the circumference of the tube (2), giving sixteen holes in all.

Please replace paragraph [0057] with the following amended paragraph:

[0057] A metal spring (4) 1095 ~~millimetres~~ millimeters long, with an external diameter of 45 ~~millimetres~~ millimeters and a wire diameter of 4 ~~millimetres~~ millimeters, the turns (TU) of which are spaced 10 mm from each other, is placed inside the tube (2). The spring (4) is arranged in a way that its turns (TU) are appreciably perpendicular with regard to the flexible handling bar (1).

Please replace paragraph [0064] with the following amended paragraph:

[0064] Two metal cylinders with an external diameter of 46 ~~millimetres~~ millimeters, a crown thickness of 4 ~~millimetres~~ millimeters and a height of 10 ~~millimetres~~ millimeters each have eight threaded holes to accommodate 3 mm screws, at mid-height, evenly distributed around their circumference.

Please replace paragraph [0065] with the following amended paragraph:

[0065] Two plastic washers with a thickness of 2 ~~millimetres~~ millimeters, an external diameter of 46 ~~millimetres~~ millimeters and an internal diameter of 26 ~~millimetres~~ millimeters, are each placed against each end of the spring (4) inside the tube (2).



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Please replace paragraph [0067] with the following amended paragraph:

[0067] A rigid cylindrical part (8) closed at one end, which may be made of PVC, with an external diameter of 54 ~~millimetres~~ millimeters, a crown thickness of 2 ~~millimetres~~ millimeters, an internal diameter of 50 ~~millimetres~~ millimeters and a height of 100 ~~millimetres~~ millimeters is perforated eight times 5 ~~millimetres~~ millimeters before its open end by holes with a diameter of 3 ~~millimetres~~ millimeters evenly distributed around its circumference.

Please replace paragraph [0068] with the following amended paragraph:

[0068] The open end of this part (8) surrounds the end of the tube (2) over a distance of 10 ~~millimetres~~ millimeters in such a way that the eight holes with a diameter of 3 mm in the end part (8) correspond to the eight holes (7) in one end of the tube (2) and to the eight threaded holes of one of the two metal cylinders placed at one end of the tube (2), inside the tube.

Please replace paragraph [0071] with the following amended paragraph:

[0071] The controls known as CS are each constituted by a metal strip 45 ~~millimetres~~ millimeters long, 4 ~~millimetres~~ millimeters wide and of low thickness (less than one ~~millimetre~~ millimeter) sheathed with flexible plastic.

Please replace paragraph [0073] with the following amended paragraph:

[0073] These variable resistors (10) are each attached on one side to the support (9) and on the other side to a strip (CS). These variable resistors (10) are each connected by an extremity to a point of a control ~~strip~~ strip (CS) and by the other ~~extremity~~ extremity to a point of the support (9).

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Please replace paragraph [0079] with the following amended paragraph:

[0079] If a more complete version is required to be produced, for example with a sequencer, screen, memories and other functions ~~authorised~~ authorized by a standard such as MIDI, and if the interior space of the end part (8) is not sufficient, it is possible to attach in the same way to the other end of the tube (2) a part similar to the end part (8), the wiring passing inside the spring (4).

Please replace paragraph [0080] with the following amended paragraph:

[0080] If the end part (8) is sufficient, or if it is chosen to produce it with larger dimensions, the tube (2) is closed at its other end by a cylindrical cap with an internal diameter of 50 mm and an internal height of 10 ~~millimetres~~ millimeters, with eight holes evenly distributed around its circumference and attached to the tube (2) in the same way as the end part (8).